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LCD TV SERVICE MANUAL

CHASSIS : ML-024E

MODEL : RZ-15LA70

CAUTION

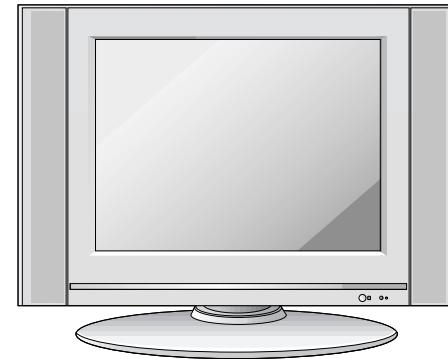
BEFORE SERVICING THE CHASSIS,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



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SAFETY PRECAUTIONS

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by Δ in the Schematic Diagram and Replacement Parts List. It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent X-RADIATION, Shock, Fire, or other Hazards. Do not modify the original design without permission of manufacturer.

General Guidance

An **isolation Transformer should always be used** during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1W), keep the resistor 10mm away from PCB.

Keep wires away from high voltage or high temperature parts.

Due to high vacuum and large surface area of picture tube, extreme care should be used in **handling the Picture Tube**. Do not lift the Picture tube by its Neck.

X-RAY Radiation

Warning:

The source of X-RAY RADIATION in this TV receiver is the High Voltage Section and the Picture Tube. For continued X-RAY RADIATION protection, the replacement tube must be the same type tube as specified in the Replacement Parts List.

To determine the presence of high voltage, use an accurate high impedance HV meter.

Adjust brightness, color, contrast controls to minimum.

Measure the high voltage.

The meter reading should indicate

23.5 ; 1.5KV: 14-19 inch, 26 ; 1.5KV: 19-21 inch,
29.0 ; 1.5KV: 25-29 inch, 30.0 ; 1.5KV: 32 inch

If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.

Before returning the receiver to the customer,

always perform an **AC leakage current check** on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate without damage of electrical shock.

Leakage Current Cold Check(Antenna Cold Check)

With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.

If the exposed metallic part has a return path to the chassis, the measured resistance should be between $1M\Omega$ and $5.2M\Omega$.

When the exposed metal has no return path to the chassis the reading must be infinite.

An other abnormality exists that must be corrected before the receiver is returned to the customer.

Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet.

Do not use a line Isolation Transformer during this check.

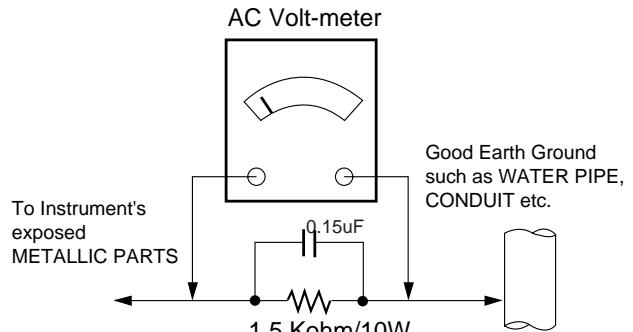
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.

Reverse plug the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS which is corresponds to 0.5mA.

In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

Leakage Current Hot Check circuit



SERVICING PRECAUTIONS

CAUTION: Before servicing receivers covered by this service manual and its supplements and addenda, read and follow the **SAFETY PRECAUTIONS** on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before;
 - a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
 - b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
 - c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.
2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc".
3. Discharge the picture tube anode only by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube anode button, using an insulating handle to avoid personal contact with high voltage.
4. Do not spray chemicals on or near this receiver or any of its assemblies.
5. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength)

CAUTION: This is a flammable mixture.

Unless specified otherwise in this service manual, lubrication of contacts is not required.

6. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
7. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
8. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.

Always remove the test receiver ground lead last.

9. *Use with this receiver only the test fixtures specified in this service manual.*

CAUTION: Do not connect the test fixture ground strap to any heat sink in this receiver.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called *Electrostatically Sensitive (ES) Devices*. Examples of typical ES devices are integrated circuits and some field-effect

transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range of 500 °F to 600 °F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch, or 1.25cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique
 - a. Allow the soldering iron tip to reach normal temperature. (500 °F to 600 °F)
 - b. Heat the component lead until the solder melts.
 - c. Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.
6. Use the following soldering technique
 - a. Allow the soldering iron tip to reach a normal temperature (500 °F to 600 °F)
 - b. First, hold the soldering iron tip and solder the strand against the component lead until the solder melts.

- c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.

CAUTION: Work quickly to avoid overheating the circuit board printed foil.

- d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

IC Remove/Replacement

Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to the areas).

"Small-Signal" Discrete Transistor

Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

Power Output, Transistor Device

Removal/Replacement

1. Heat and remove all solder from around the transistor leads.
2. Remove the heat sink mounting screw (if so equipped).
3. Carefully remove the transistor from the heat sink of the circuit board.
4. Insert new transistor in the circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heat sink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicular y to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and if necessary, apply additional solder.

Fuse and Conventional Resistor

Removal/Replacement

1. Clip each fuse or resistor lead at top of the circuit board hollow stake.
2. Securely crimp the leads of replacement component around notch at stake top.
3. Solder the connections.

CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board causing the foil to separate from or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

At IC Connections

To repair a defective copper pattern at IC connections use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections).

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary).
2. carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
3. Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the out-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair the defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.

CAUTION: Be sure the insulated jumper wire is dressed so the it does not touch components or sharp edges.

SPECIFICATION

NOTE : Specifications and others are subject to change without notice for improvement.

1. Application range

This specification is applied to ML-024E chassis.

2. Requirement for Test

Testing for standard of each part must be followed in below condition.

- (1) Temperature: $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ (But, CST must be tested $40^{\circ}\text{C} \pm 5^{\circ}\text{C}$)
- (2) Humidity: $65\% \pm 10\%$
- (3) Power: Standard input voltage (AC 100-220V, 50/60Hz)
- (4) Measurement must be performed after heat-run more than 15min.

- (5) Adjusting standard for this chassis is followed a special standard.
- (6) Use the parts only designated in B.O.M.,PARTS SPEC.,or drawings.
- (7) Follow each drawing or spec for spec and performance of parts,based upon P/N of RPL

3. Test and Inspection method

- (1) Capacity: Follow LG electronics TV Testing Standard.
- (2) RCA JACK performance :Follow the standard of LG.
- (3) Another Required Standard
Follow the standard of each nation.

4. General Specification

No.	Item	Specification				Remark
		Min	Typ	Max	Unit	
1	Receivable broadcasting system	1)PAL/SECAM-BG 2)PAL/SECAM-DK 3)PAL-I/I 4)SECAM-L/L' 5)NTSC -M 6)NTSC 4.43(AV) 7)PAL N/M 8)NTSC-M				EU/Non-EU (PAL Market)
						NTSC Market
2	RF input channel	VHF: E02 ~ E12 UHF : E21 ~ E69 CATV : S1 ~ S20 HYPER : S21 ~ S41 L/L' : B,C,D VHF : 2 ~ 13 UHF : 14 ~ 69 CATV : 1 ~ 125 VHF low : 1 ~ M10 VHF high : 14 ~ 69 UHF : S23 ~ 62				PAL
						FRANCE
						NTSC
						JAPAN
3	Input voltage	110 - 220V $\pm 10\%$, 50/60Hz				USA(120V/60Hz) EU(230~240V/50Hz) JAPAN(100V/60Hz)
4	Tuning system	FVS 100 program FS				PAL, 200PR.(option) NTSC
5	Market	World Wide				Initial : Zenith(RMS)
6	Screen size	15.1" diagonal (384mm) 15" diagonal 17.1" diagonal				024A 024E 024F
7	Aspect ratio	4:3 16:9				024A/E 024F
8	Operating temperature	0		50	deg	024A/E/F
9	Operating humidity	10		90	%RH	024A/F
		20		85		024E
10	Storage temperature	-20		60	deg	024A/E/F
11	Storage humidity	10		90	%RH	024A/F
		5		85		024E

5. Feature and Function

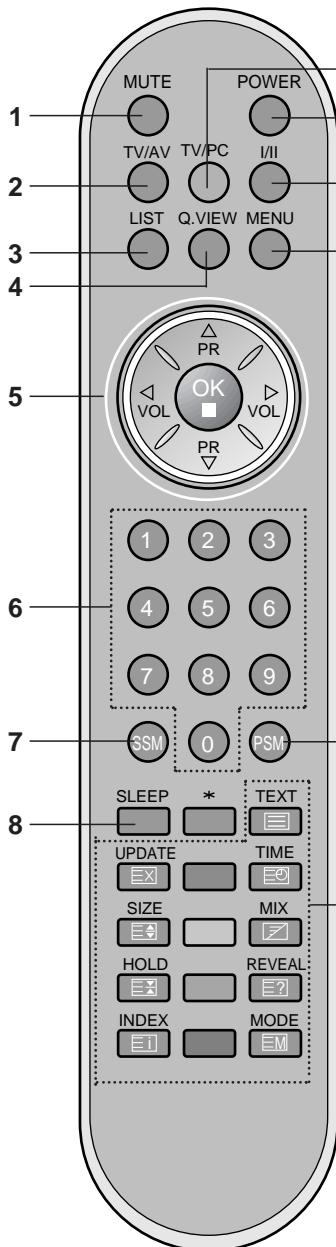
No.	Item	Specification				Remark
		Min	Typ	Max	Unit	
1	Teletext	TOP,FLOF,LIST				TOP(option)
2	REMOCON	NEC code				
3	RGB(VGA) input	1	Rear			D-Sub 15 pin
4	Component input	0	Y, P _B , P _R			Option, Non-EU
5	PERI TV Connector	1	Rear (Full Scart)			Option, EU
6	AV input	1	Rear			
7	S-video input	1	Rear			
8	RS232 Port	1	Rear			Only for RMS
9	H/P output	1	Rear			
10	PC sound Input	1				
11	2 Carrier stereo	BG, DK				
12	NICAM Stereo	BG, I, LL'				
13	2 Carrier Dual	BG, DK				
14	NICAM Dual	BG, I, LL'				
15	Local Key	TV/video, menu, enter Volume (◀,▶), Channel(▲,▼)				
16	Main Power Key	O				
17	DPM (Display power management)	O				
18	AVL	O				
19	On/Off Timer	O				
20	APC	O				PAL : PSM
21	DASP	O				PAL : SSM

DESCRIPTION OF CONTROLS

All the functions can be controlled with the remote control handset. Some functions can also be adjusted with the buttons on the side panel of the set.

Only the remote control handset supplied will operate this set.

Remote control handset



- 9 Before you use the remote control handset, please install the batteries. See the next page.
- 10 1. **MUTE**
switches the sound on or off.
- 11 2. **TV/AV**
selects TV or AV mode.
clears the menu from the screen.
switches the set on from standby.
- 12 3. **LIST**
displays the programme table.
- 13 4. **Q.VIEW**
returns to the previously viewed programme.
selects a favourite programme.
- 14 5. **▲ / ▼ (Programme Up/Down)**
selects a programme or a menu item.
switches the set on from standby.
◀ / ▶ (Volume Up/Down)
adjusts the volume.
adjusts menu settings.
OK
accepts your selection or displays the current mode.
6. **NUMBER BUTTONS**
switches the set on from standby or directly select a number.
7. **SSM (Sound Status Memory)**
recalls your preferred sound setting.
8. **SLEEP**
sets the sleep timer.

9. TV/PC

selects TV or PC mode.
clears the menu from the screen.
switches the set on from standby.

10. POWER

switches the set on from standby or off to standby.

11. I/II

selects the language during dual language broadcast.
selects the sound output (option).

12. MENU

selects a menu.

13. PSM (Picture Status Memory)

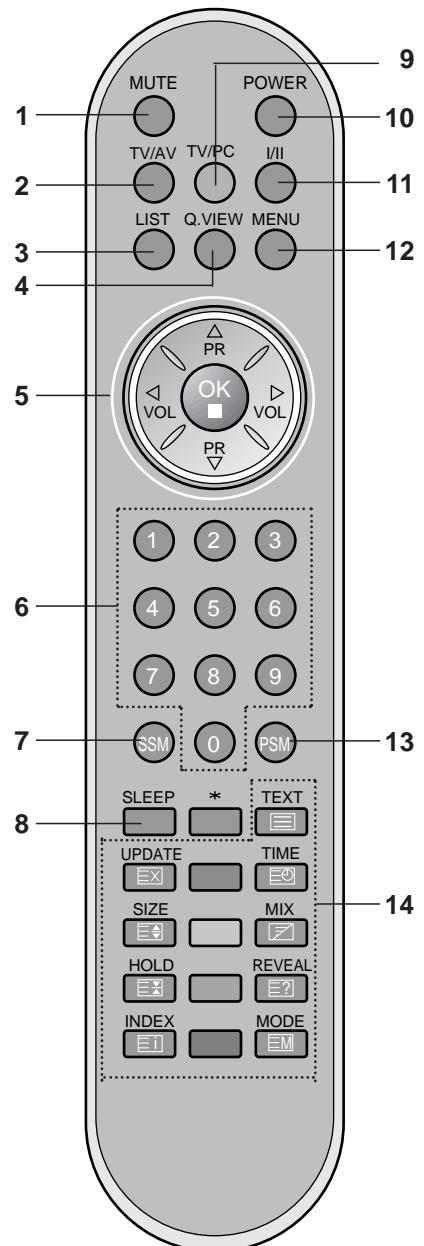
recalls your preferred picture setting.

14. TELETEXT BUTTONS (option)

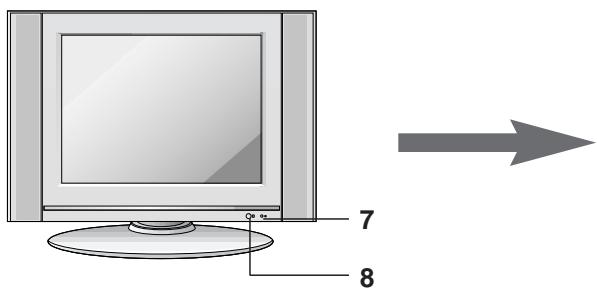
These buttons are used for teletext.
For further details, see the 'Teletext' section.

*** : No function**

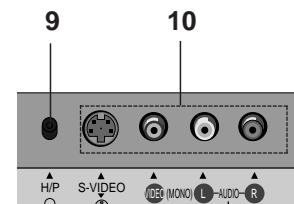
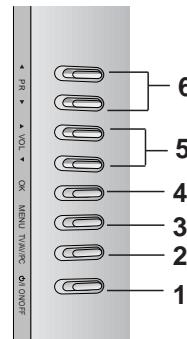
COLOURED BUTTONS : These buttons are used for teletext (only TELETEXT models) or programme edit.



• RZ-15LA70 series

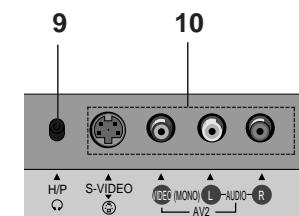
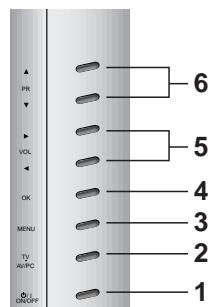
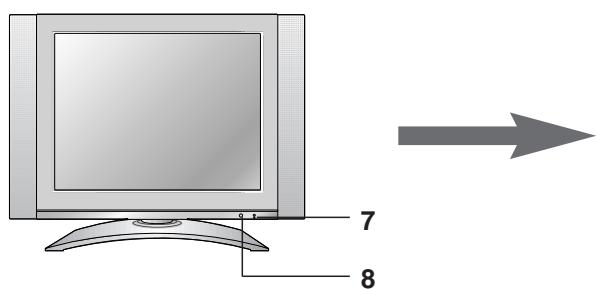


Side panel



Back panel

• RZ-15LA62 series



Back panel

1. **ON/OFF**

switches the set on from standby or off to standby.

Note : Power line lives even when the power is off.

2. **TV/AV/PC**

selects TV, AV or PC monitor mode.
clears the menu from the screen.

switches the set on from standby.

3. **MENU**

selects a menu.

4. **OK**

accepts your selection or displays the current mode.

5. **◀ / ▶ (Volume Up/Down)**

adjusts the volume.
adjusts menu settings.

6. **▲ / ▼ (Programme Up/Down)**

selects a programme or a menu item.
switches the set on from standby.

7. **POWER/STANDBY INDICATOR**

illuminates red in standby mode.
illuminates green when the set is switched on.

8. **REMOTE CONTROL SENSOR**

9. **HEADPHONE SOCKET**

Connect the headphone plug to this socket.

10. **AUDIO/VIDEO IN SOCKETS (AV2)**

Connect the audio/video out sockets of external equipment to these sockets.

S-VIDEO/AUDIO IN SOCKETS (SAV)

Connect the video out socket of an S-VIDEO VCR to the **S-VIDEO** socket.

Connects the audio out sockets of the S-VIDEO VCR to the audio sockets as in **AV2**.

ADJUSTMENT INSTRUCTION

1. Application Object

This instruction is for the application to the LCD TV/Monitor, ML-024E.

2. Notes

- (1) This LCD TV has power within set. Connect the power correctly, then start the adjustment.
- (2) The adjustment must be performed under the correct sequence.
- (3) The adjustment must be performed in the circumstance of $25\pm3^{\circ}\text{C}$ of temperature and $65\pm10\%$ of relative humidity if there is no specific designation.
- (4) The input voltage of the receiver must keep 100~220V, 50/60Hz in adjusting.
- (5) The set must be operated for 15 minutes preliminary before adjustment if there is no specific designation.

- 'Heat Run' must be performed with the full white signal or TV noise signal in the internal part of the set.
- The time for 'Heat Run' can be changed owing to production plan.
- Condition of Line Test : Standard color signal - $65\pm1\text{dBuV}$

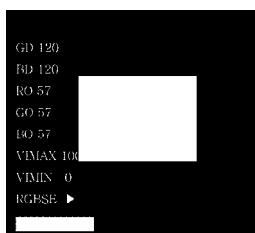
3. PC Mode Adjustment

3-1. Required Test Equipment

- (1) Window Pattern which satisfied with VESA Spec. or pattern which has White-Black signal simultaneously.
- (2) Remote control for adjustment

3-2. Preparation for Adjustment

- (1) Perform 'Heat Run' for more than 15 minutes in white pattern.
- (2) Connect the signal of pattern generator with LCD TV of PC Input Jack(D-Sub).
- (3) Confirm the XGA(1024x768) Window Pattern or signal(White-Black) using the 801-GF/GD, VG819.
- (4) Use the IN-START Key on R/C for adjustment to enter the PC adjustment mode.
- (5) Example of adjustment screen.



<Fig. 1>

- (6) Enter into the adjustment mode as <Fig. 1> and select the cursor(red letters) to "RGBSE ►" with the channel key on R/C for adjustment.
- (7) Press the Volume ► on R/C for adjustment.

- (8) At this time the adjustment starts automatically changing the number in order of RO --> GO --> BO --> RD --> GD --> BD.

Finally, when the number of BD is changed the adjustment is completed.

- (9) Press the MENU or EXIT key to come out of the adjustment mode.

4. COMPONENT Adjustment

(Only CMO MODULE)

4-1. Required Test Equipment

- (1) Standard Color bar (75% Full Color bar) -> refer <fig.2>
- (2) Remote control for adjustment

4-2. Preparation for Adjustment

- (1) Operate Component Mode adjustment, after PC Mode adjustment.
- (2) Connect the signal of pattern generator with LCD TV of Component Input Jack(D-Sub).
- (3) Confirm the Color bar (75% Full Color bar) signal using the 801-GF/GD, VG819.
- (4) Use the IN-START Key on R/C for adjustment to enter the Component adjustment mode.
- (5) Example of adjustment screen.



<Fig. 1>

- (6) Enter into the adjustment mode as <Fig. 2> and select the cursor(red letters) to "DTVADJT ►" with the channel key on R/C for adjustment.
- (7) Press the Volume ► on R/C for adjustment.
- (8) At this time the adjustment starts automatically changing the color of Color bar.

Finally, when the number of BD is changed the adjustment is completed.

- (9) Press the ENTER key, and then press EXIT key to come out of the adjustment mode.

5. Option1 data(200PR~A2 ST:1bit, SYS:2bit)

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1
2	0	0	0	0	0	0	2
3	0	0	0	0	0	0	3
4	0	0	0	0	0	1	0
5	0	0	0	0	0	1	1
6	0	0	0	0	0	1	2
7	0	0	0	0	0	1	3
8	0	0	0	0	1	0	0
9	0	0	0	0	1	0	1
10	0	0	0	0	1	0	2
11	0	0	0	0	1	0	3
12	0	0	0	0	1	1	0
13	0	0	0	0	1	1	1
14	0	0	0	0	1	1	2
15	0	0	0	0	1	1	3
16	0	0	0	1	0	0	0
17	0	0	0	1	0	0	1
18	0	0	0	1	0	0	2
19	0	0	0	1	0	0	3
20	0	0	0	1	0	1	0
21	0	0	0	1	0	1	1
22	0	0	0	1	0	1	2
23	0	0	0	1	0	1	3
24	0	0	0	1	1	0	0
25	0	0	0	1	1	0	1
26	0	0	0	1	1	0	2
27	0	0	0	1	1	0	3
28	0	0	0	1	1	1	0
29	0	0	0	1	1	1	1
30	0	0	0	1	1	1	2
31	0	0	0	1	1	1	3

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
32	0	0	1	0	0	0	0
33	0	0	1	0	0	0	1
34	0	0	1	0	0	0	2
35	0	0	1	0	0	0	3
36	0	0	1	0	0	1	0
37	0	0	1	0	0	1	1
38	0	0	1	0	0	1	2
39	0	0	1	0	0	1	3
40	0	0	1	0	1	0	0
41	0	0	1	0	1	0	1
42	0	0	1	0	1	0	2
43	0	0	1	0	1	0	3
44	0	0	1	0	1	1	0
45	0	0	1	0	1	1	1
46	0	0	1	0	1	1	2
47	0	0	1	0	1	1	3
48	0	0	1	1	0	0	0
49	0	0	1	1	0	0	1
50	0	0	1	1	0	0	2
51	0	0	1	1	0	0	3
52	0	0	1	1	0	1	0
53	0	0	1	1	0	1	1
54	0	0	1	1	0	1	2
55	0	0	1	1	0	1	3
56	0	0	1	1	1	0	0
57	0	0	1	1	1	0	1
58	0	0	1	1	1	0	2
59	0	0	1	1	1	0	3
60	0	0	1	1	1	1	0
61	0	0	1	1	1	1	1
62	0	0	1	1	1	1	2
63	0	0	1	1	1	1	3

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
64	0	1	0	0	0	0	0
65	0	1	0	0	0	0	1
66	0	1	0	0	0	0	2
67	0	1	0	0	0	0	3
68	0	1	0	0	0	1	0
69	0	1	0	0	0	1	1
70	0	1	0	0	0	1	2
71	0	1	0	0	0	1	3
72	0	1	0	0	1	0	0
73	0	1	0	0	1	0	1
74	0	1	0	0	1	0	2
75	0	1	0	0	1	0	3
76	0	1	0	0	1	1	0
77	0	1	0	0	1	1	1
78	0	1	0	0	1	1	2
79	0	1	0	0	1	1	3
80	0	1	0	1	0	0	0
81	0	1	0	1	0	0	1
82	0	1	0	1	0	0	2
83	0	1	0	1	0	0	3
84	0	1	0	1	0	1	0
85	0	1	0	1	0	1	1
86	0	1	0	1	0	1	2
87	0	1	0	1	0	1	3
88	0	1	0	1	1	0	0
89	0	1	0	1	1	0	1
90	0	1	0	1	1	0	2
91	0	1	0	1	1	0	3
92	0	1	0	1	1	1	0
93	0	1	0	1	1	1	1
94	0	1	0	1	1	1	2
95	0	1	0	1	1	1	3
96	0	1	1	0	0	0	0
97	0	1	1	0	0	0	1
98	0	1	1	0	0	0	2
99	0	1	1	0	0	0	3
100	0	1	1	0	0	1	0
101	0	1	1	0	0	1	1
102	0	1	1	0	0	1	2
103	0	1	1	0	0	1	3
104	0	1	1	0	1	0	0
105	0	1	1	0	1	0	1
106	0	1	1	0	1	0	2
107	0	1	1	0	1	0	3
108	0	1	1	0	1	1	0
109	0	1	1	0	1	1	1

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
110	0	1	1	0	1	1	2
111	0	1	1	0	1	1	3
112	0	1	1	1	0	0	0
113	0	1	1	1	0	0	1
114	0	1	1	1	0	0	2
115	0	1	1	1	0	0	3
116	0	1	1	1	0	1	0
117	0	1	1	1	0	1	1
118	0	1	1	1	0	1	2
119	0	1	1	1	0	1	3
120	0	1	1	1	1	0	0
121	0	1	1	1	1	0	1
122	0	1	1	1	1	0	2
123	0	1	1	1	1	0	3
124	0	1	1	1	1	1	0
125	0	1	1	1	1	1	1
126	0	1	1	1	1	1	2
127	0	1	1	1	1	1	3
128	1	0	0	0	0	0	0
129	1	0	0	0	0	0	1
130	1	0	0	0	0	0	2
131	1	0	0	0	0	0	3
132	1	0	0	0	0	0	1
133	1	0	0	0	0	0	1
134	1	0	0	0	0	0	2
135	1	0	0	0	0	0	3
136	1	0	0	0	0	1	0
137	1	0	0	0	0	1	0
138	1	0	0	0	0	1	2
139	1	0	0	0	0	1	0
140	1	0	0	0	0	1	0
141	1	0	0	0	1	1	1
142	1	0	0	0	1	1	2
143	1	0	0	0	1	1	3
144	1	0	0	1	0	0	0
145	1	0	0	1	0	0	1
146	1	0	0	1	0	0	2
147	1	0	0	1	0	0	3
148	1	0	0	1	0	1	0
149	1	0	0	1	0	1	1
150	1	0	0	1	0	1	2
151	1	0	0	1	0	1	3
152	1	0	0	1	1	0	0
153	1	0	0	1	1	0	1
154	1	0	0	1	1	0	2
155	1	0	0	1	1	0	3

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
156	1	0	0	1	1	1	0
157	1	0	0	1	1	1	1
158	1	0	0	1	1	1	2
159	1	0	0	1	1	1	3
160	1	0	1	0	0	0	0
161	1	0	1	0	0	0	1
162	1	0	1	0	0	0	2
163	1	0	1	0	0	0	3
164	1	0	1	0	0	1	0
165	1	0	1	0	0	1	1
166	1	0	1	0	0	1	2
167	1	0	1	0	0	1	3
168	1	0	1	0	1	0	0
169	1	0	1	0	1	0	1
170	1	0	1	0	1	0	2
171	1	0	1	0	1	0	3
172	1	0	1	0	1	1	0
173	1	0	1	0	1	1	1
174	1	0	1	0	1	1	2
175	1	0	1	0	1	1	3
176	1	0	1	1	0	0	0
177	1	0	1	1	0	0	1
178	1	0	1	1	0	0	2
179	1	0	1	1	0	0	3
180	1	0	1	1	0	1	0
181	1	0	1	1	0	1	1
182	1	0	1	1	0	1	2
183	1	0	1	1	0	1	3
184	1	0	1	1	1	0	0
185	1	0	1	1	1	0	1
186	1	0	1	1	1	0	2
187	1	0	1	1	1	0	3
188	1	0	1	1	1	1	0
189	1	0	1	1	1	1	1
190	1	0	1	1	1	1	2
191	1	0	1	1	1	1	3
192	1	1	0	0	0	0	0
193	1	1	0	0	0	0	1
194	1	1	0	0	0	0	2
195	1	1	0	0	0	0	3
196	1	1	0	0	0	1	0
197	1	1	0	0	0	1	1
198	1	1	0	0	0	1	2
199	1	1	0	0	0	1	3
200	1	1	0	0	1	0	0
201	1	1	0	0	1	0	1

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
202	01	1	0	0	1	0	2
203	1	1	0	0	1	0	3
204	1	1	0	0	1	1	0
205	1	1	0	0	1	1	1
206	1	1	0	0	1	1	2
207	1	1	0	0	1	1	3
208	1	1	0	1	0	0	0
209	1	1	0	1	0	0	1
210	1	1	0	1	0	0	2
211	1	1	0	1	0	0	3
212	1	1	0	1	0	1	0
213	1	1	0	1	0	1	1
214	1	1	0	1	0	1	2
215	1	1	0	1	0	1	3
216	1	1	0	1	1	0	0
217	1	1	0	1	1	0	1
218	1	1	0	1	1	0	2
219	1	1	0	1	1	0	3
220	1	1	0	1	1	1	0
221	1	1	0	1	1	1	1
222	1	1	0	1	1	1	2
223	1	1	0	1	1	1	3
224	1	1	1	0	0	0	0
225	1	1	1	0	0	0	1
226	1	1	1	0	0	0	2
227	1	1	1	0	0	0	3
228	1	1	1	0	0	1	0
229	1	1	1	0	0	1	1
230	1	1	1	0	0	1	2
231	1	1	1	0	0	1	3
232	1	1	1	0	1	0	0
233	1	1	1	0	1	0	1
234	1	1	1	0	1	0	2
235	1	1	1	0	1	0	3
236	1	1	1	0	1	1	0
237	1	1	1	0	1	1	1
238	1	1	1	0	1	1	2
239	1	1	1	0	1	1	3
240	1	1	1	1	0	0	0
241	1	1	1	1	0	0	1
242	1	1	1	1	0	0	2
243	1	1	1	1	0	0	3
244	1	1	1	1	0	1	0
245	1	1	1	1	0	1	1
246	1	1	1	1	0	1	2
247	1	1	1	1	0	1	3

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
248	1	1	1	1	1	0	0
249	1	1	1	1	1	0	1
250	1	1	1	1	1	0	2
251	1	1	1	1	1	0	3
252	1	1	1	1	1	1	0
253	1	1	1	1	1	1	1
254	1	1	1	1	1	1	2
255	1	1	1	1	1	1	3

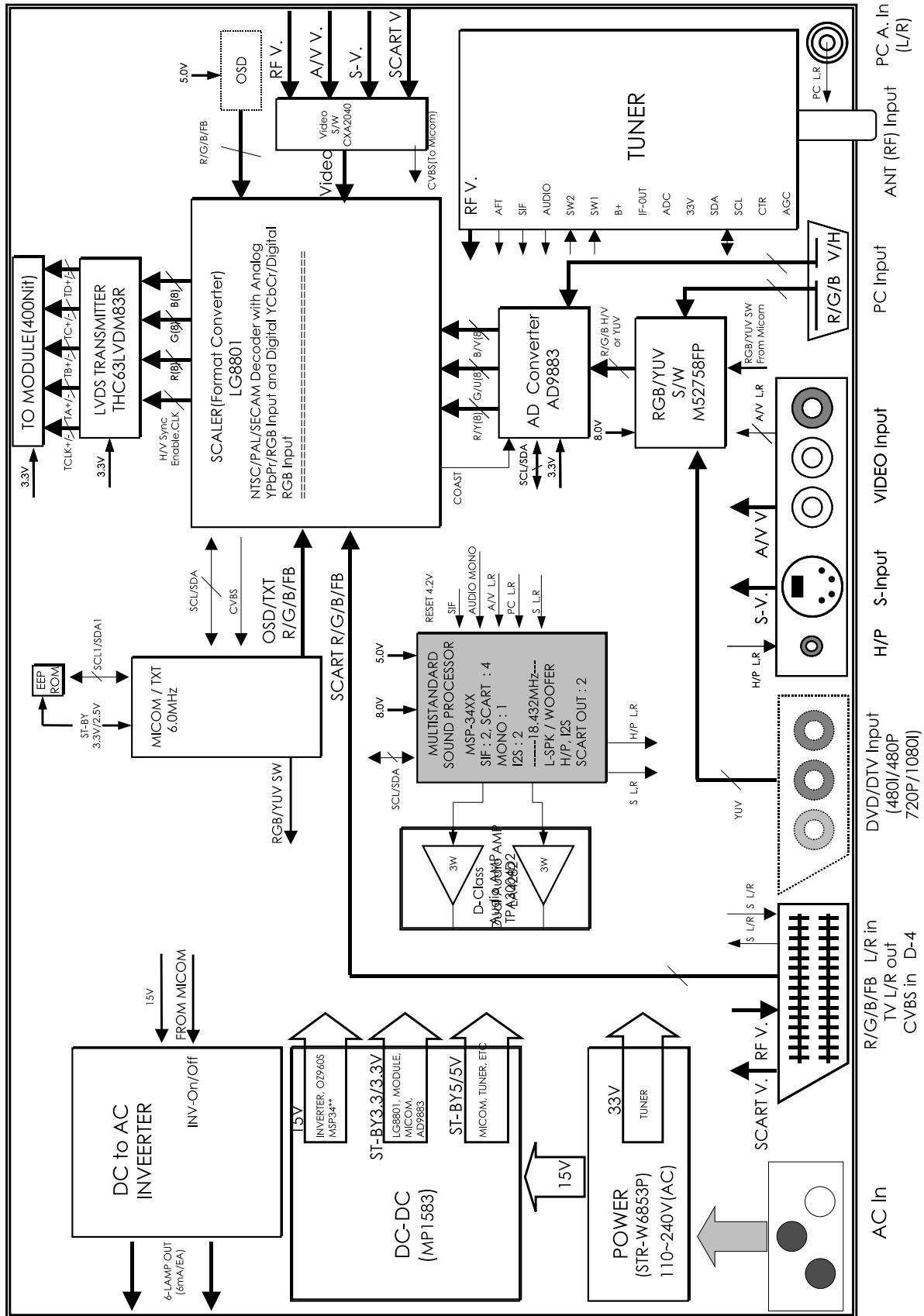
6. Option2 data(ACMS~BBACK:1bit,LANG:3bit)

OPTION Data	ACMS	VOL	HIDEV
0	0	0	0
1	0	0	1
2	0	1	0
3	0	1	1
4	1	0	0
5	1	0	1
6	1	1	0
7	1	1	1

7. Option3 data(IIC AFT~CH+AU:1bit)

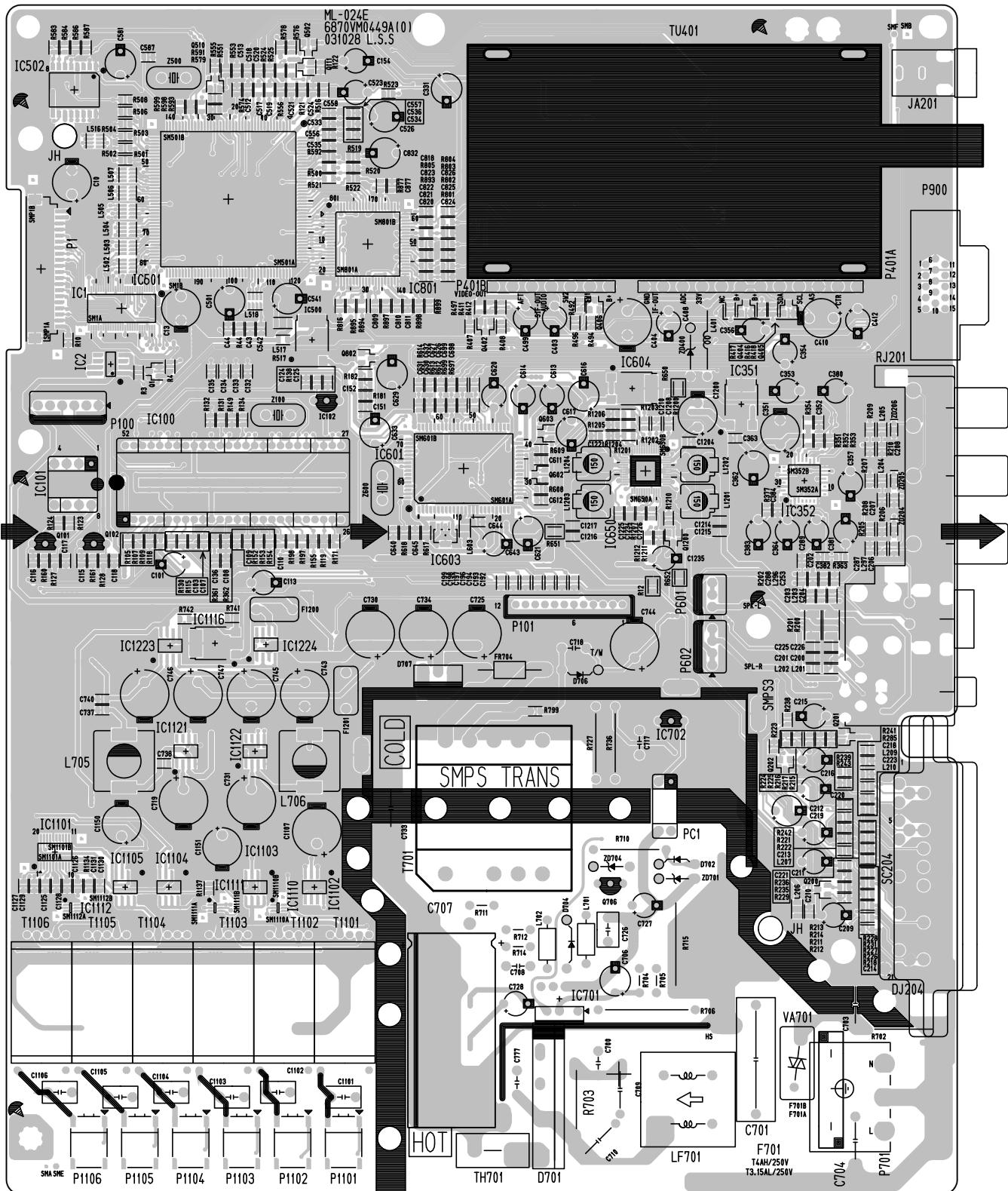
OPTION Data	IIC AFT	MD SAVE	MONO	CH+AUS
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

BLOCK DIAGRAM

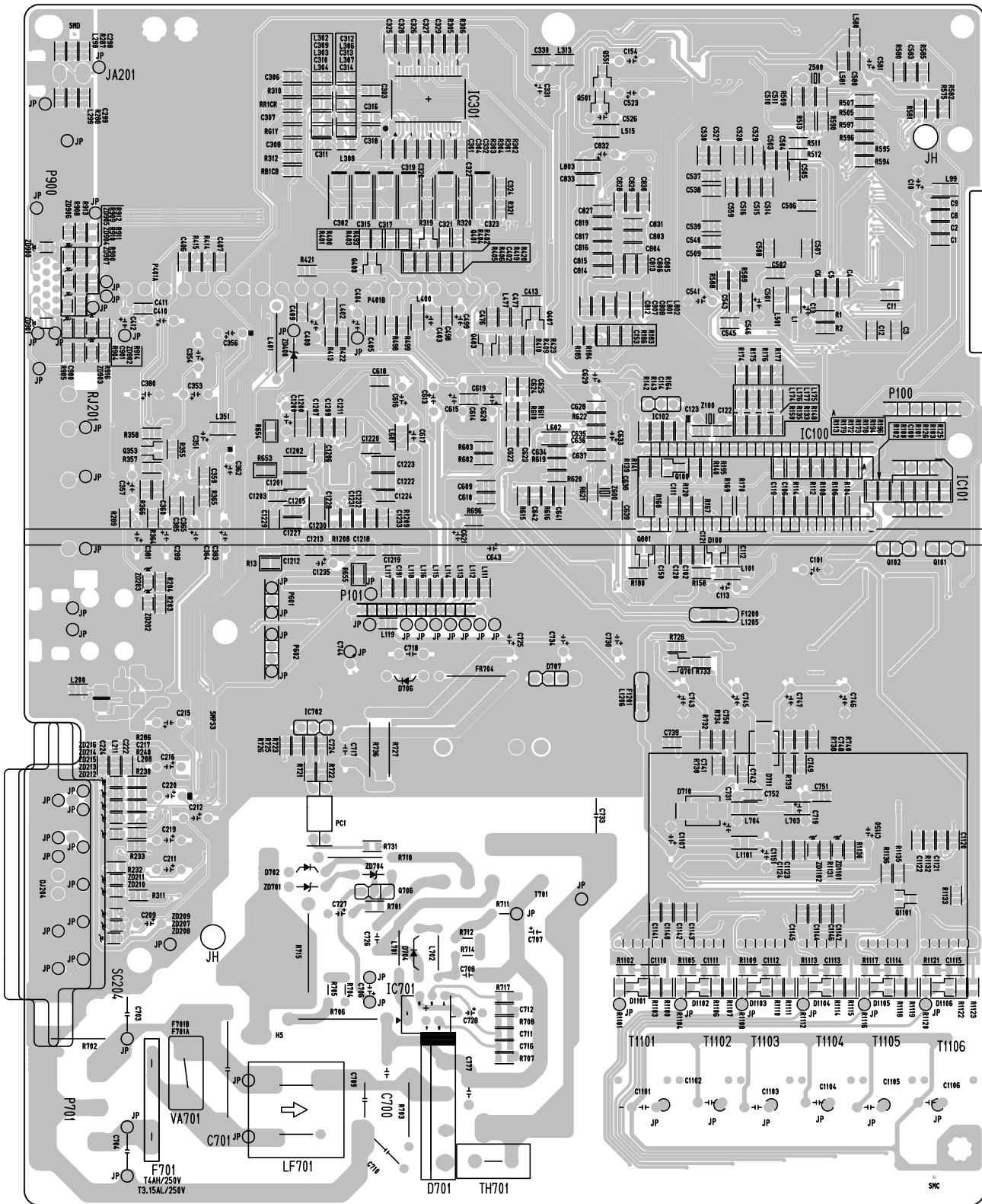


PRINTED CIRCUIT BOARD

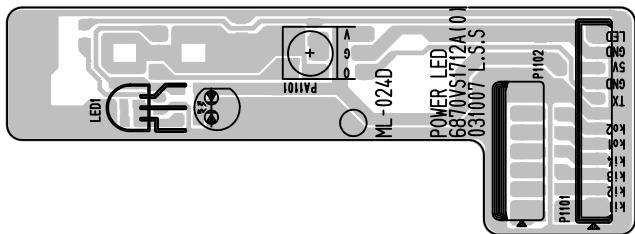
MAIN (TOP)



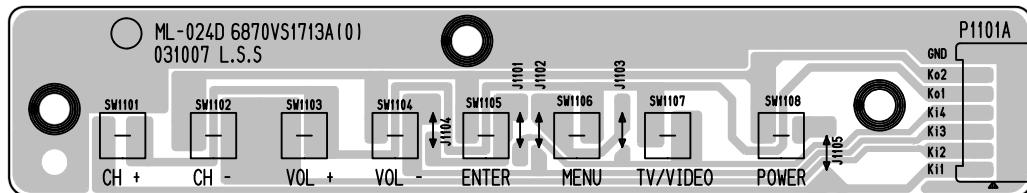
MAIN (BOTTOM)



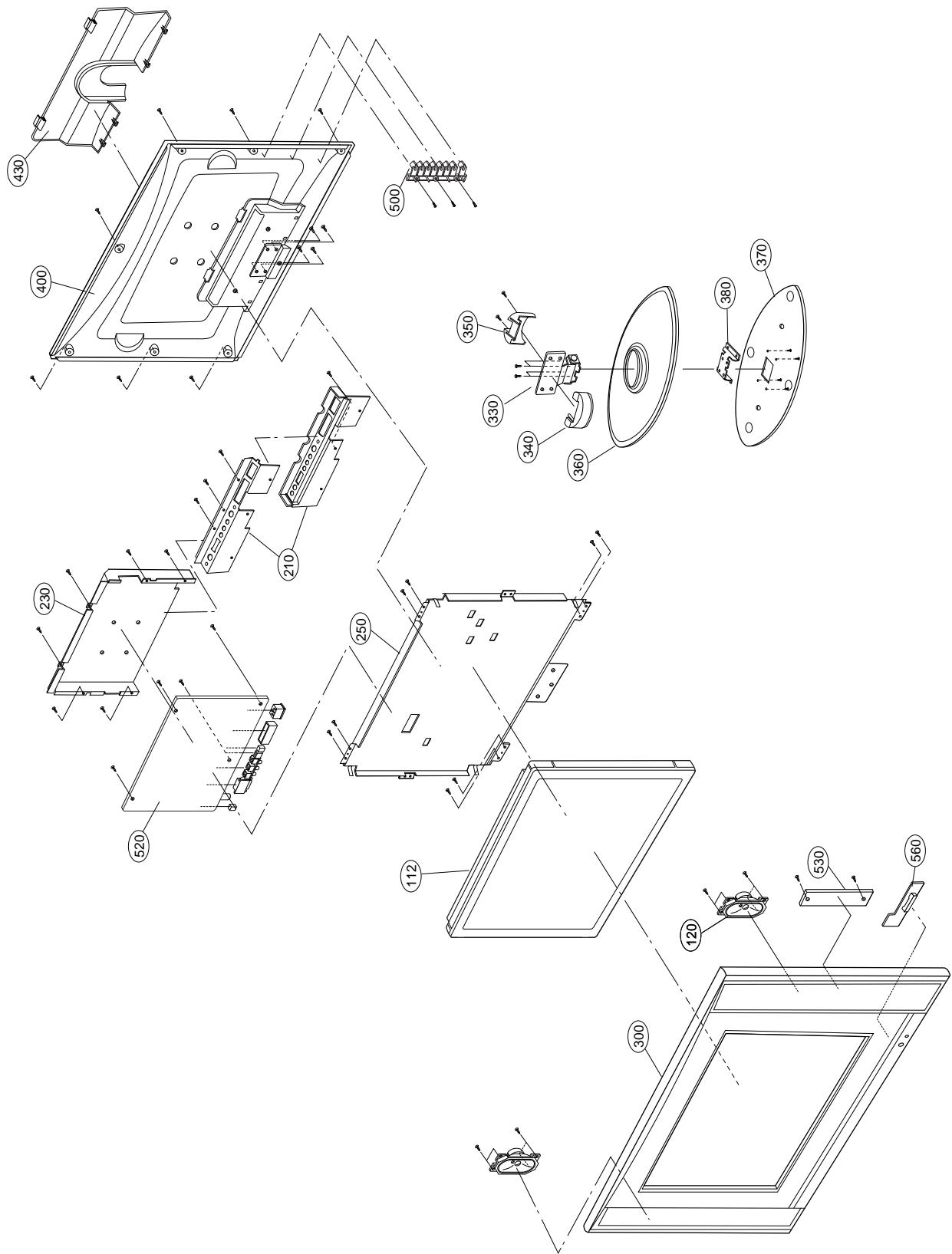
POWER



CONTROL



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

No.	PART NO.	DESCRIPTION
112	6306V15002A	LCD MODULE, M150X3-L04 XGA CHIMEI TFT COLOR
120	6400GKTX01A	SPEAKER,FULLRANGE F1527C-6428 K-TONE 80HM 7/12W 83DB OTHERS 34.5X71
	6400GKTX01B	SPEAKER,FULLRANGE F1527C-6428-2 K-TONE 80HM 7/12W 85DB OTHERS 40*70MM TRACK TYPE
210	4811V00076B	BRACKET ASSEMBLY, REAR AV RZ-15LA70 ML024E .
230	4950V00192B	METAL, SHIELD SBHG ML-024E
	4950V00192D	METAL, SHIELD SBHG 15LA70 C/SKD
250	4950V00189A	METAL, FRAME EGI 1.2T RZ-15LA70
	4950V00189C	METAL, FRAME EGI C/SKD
300	3091V00593A	CABINET ASSEMBLY, RZ-15LA70 NON ML024E .
	3091V00593C	CABINET ASSEMBLY, RZ-15LA70 STEREO ML024E C/SKD
310	5020V00874A	BUTTON, CONTROL RZ-15LA70 ABS, HF-380 8KEY
330	4950V00157F	METAL, HINGE ASSY NON 15LA70
340	4810V00777A	BRACKET, STAND 15LA60 ML012B NON HINGE FRONT
	4810V00777D	BRACKET, STAND RU-15LA61 ML012C HIPS 60HR FRONT
350	4810V00778A	BRACKET, STAND 15LA60 ML012B NON HINGE COVER
	4810V00778D	BRACKET, STAND RU-15LA61 ML012C HIPS 60HR REAR
360	4810V00928A	BRACKET, STAND RZ-15LA70 NON ABS, HF-380
370	4950V00190A	METAL, BASE SPCC(CR) 3T RZ-15LA70
380	4950V00194A	METAL, STAND SPCC(CR) SUPPORTER(LA70)
400	3809V00411A	BACK COVER ASSEMBLY, RZ-15LA70 NON ML024E
	3809V00411D	BACK COVER ASSEMBLY, RZ-15LA70 1SCART C/SKD
430	3550V00385A	COVER, REAR AV RZ-15LA70 ABS, HF-380
520	6871VMMR10A	PWB(PCB) ASSEMBLY,MAIN ML-024E RZ-15LA70 PCB ASSY
530	6871VSMQ31A	PWB(PCB) ASSEMBLY,SUB CONT ML024D 70TOOL CONTROL ASSY
560	6871VSMQ30A	PWB(PCB) ASSEMBLY,SUB POWER ML024D 70TOOL POWER ASSY

REPLACEMENT PARTS LIST

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;	CC, CX, CK, CN : Ceramic	RD : Carbon Film
	CQ : Polyester	RS : Metal Oxide Film
	CE : Electrolytic	RN : Metal Film

LOCA. NO	PART NO	DESCRIPTION	LOCA. NO	PART NO	DESCRIPTION			
IC								
IC1	0IMCRTH001A	THC63LVDM83R THINE ELECTRONICS 56P TSSOP	Q404	0TR387500AA	CHIP 2SC3875S(ALY) KEC			
IC100	0ISM555000B	SDA555XFL 52DIP ST FLASH MEMORY	Q405	0TR387500AA	CHIP 2SC3875S(ALY) KEC			
IC101	0IAL241610B	AT24C16A-10PI-2.7 8PIN DIP ST EEPROM NON	Q406	0TR387500AA	CHIP 2SC3875S(ALY) KEC			
IC102	0IFA752700A	KA75270Z 3 TP RE-SET IC MC-007	Q407	0TR387500AA	CHIP 2SC3875S(ALY) KEC			
IC1101	0IMCRO2001A	OZ960S O2MICRO 20P SSOP	Q501	0TR387500AA	CHIP 2SC3875S(ALY) KEC			
IC1110	0IMCRRH005A	UM6K1N ROHM 6P SOT363	Q502	0TR150400BA	CHIP 2SA1504S(ASY) KEC			
IC1111	0IMCRRH005A	UM6K1N ROHM 6P SOT363	Q510	0TR150400BA	CHIP 2SA1504S(ASY) KEC			
IC1112	0IMCRRH005A	UM6K1N ROHM 6P SOT363	Q551	0TR150400BA	CHIP 2SA1504S(ASY) KEC			
IC1121	0IMCRMZ001A	MP1583DN MONOLITHIC POWER SYSTEM 8P TSOP	Q602	0TR150400BA	CHIP 2SA1504S(ASY) KEC			
IC1122	0IMCRMZ001A	MP1583DN MONOLITHIC POWER SYSTEM 8P TSOP	Q603	0TR150400BA	CHIP 2SA1504S(ASY) KEC			
IC351	0IMCRFA010A	KA7809R, FAIRCHILD 2P D-PAK	Q701	0TR387500AA	CHIP 2SC3875S(ALY) KEC			
IC352	0ISO204000A	CXA2040AQ 32P,QFP BK IIC BUS VIDEO S/W	Q703	0TR387500AA	CHIP 2SC3875S(ALY) KEC			
IC500	0IMCRFA016A	KA78RH33 FAIRCHILD 2P D-PAK R/TP 800MA	Q706	0TR322709AA	KTC3227-Y,TP(KTC1627A),KEC			
IC501	0IMCRTW001B	LG8801-H TECHWELL 160P QPFD	Q801	0TR387500AA	CHIP 2SC3875S(ALY) KEC			
IC502	0ICTMM005B	SC786110DW MOTOROLA SOIC 16P	Q802	0TR150400BA	CHIP 2SA1504S(ASY) KEC			
IC601	0IMCRMN011D	MSP3410G QA B8 V3 MICRONAS 80P QFP	R1211	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A SO-8			
IC603	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VOLTAGE DETECTOR	R1212	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A SO-8			
IC604	0IMCRFA009A	KA78M08RTM, FAIRCHILD 2P D-PAK	DIODE					
IC650	0IMCRTI022D	TPA3004D2 TEXAS INSTRUMENT 48P PQFP	D100	0DD181009AB	KDS181 TP KEC - 85V 300MA			
IC701	0IPMGSK012A	STR-W6853P SANKEN 6P T0-220 ST SWITCHING	D1101	0DD181009AB	KDS181 TP KEC - 85V 300MA			
IC702	0IMCRFA007A	KA431Z FAIRCHILD 3DIP,TO-92 TP SHUNT	D1102	0DD181009AB	KDS181 TP KEC - 85V 300MA			
IC801	0IMCRAD002A	AD9883A ANALOG DEVICE 80P TQFP	D1103	0DD181009AB	KDS181 TP KEC - 85V 300MA			
PC1	0IL1817000G	LTV817M-VB 4P,DIP BK PHOTO COUPLER	D1104	0DD181009AB	KDS181 TP KEC - 85V 300MA			
PC2	0IL1817000G	LTV817M-VB 4P,DIP BK PHOTO COUPLER	D1105	0DD181009AB	KDS181 TP KEC - 85V 300MA			
Q101	0IFA270000A	2N7000TA TO-92, 3P TP LEVEL SHIFT 60V/0.2A	D1106	0DD181009AB	KDS181 TP KEC - 85V 300MA			
Q102	0IFA270000A	2N7000TA TO-92, 3P TP LEVEL SHIFT 60V/0.2A	D701	0DRSA00150A	RBV-406 SANKEN BK USC 600V 4A 80VA SEC 10MA			
TRANSISTOR								
IC1102	0TFFC80044A	FDS8958A FAIRCHILD R/TP SO-8 30V 7A	D702	0DD100009AM	EU1ZV(1) TP SANKEN			
IC1103	0TFFC80044A	FDS8958A FAIRCHILD R/TP SO-8 30V 7A	D704	0DD100009AM	EU1ZV(1) TP SANKEN			
IC1104	0TFFC80044A	FDS8958A FAIRCHILD R/TP SO-8 30V 7A	D706	0DR060009AA	TVR06J TP GULF DO41 600V 0.6A			
IC1105	0TFFC80044A	FDS8958A FAIRCHILD R/TP SO-8 30V 7A	D707	0DRSD00091A	SF20JC10 ST FTO220(4115) 100V 20A 200A			
IC1223	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A SO-8	D710	0DR340009AA	MBRS340 TP FAIRCHILD - 40V 3A 80A - 2MA			
IC1224	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A SO-8	D711	0DR340009AA	MBRS340 TP FAIRCHILD - 40V 3A 80A - 2MA			
IC2	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A SO-8	LED1	0DL200000CA	LED,SAM5670(DL-2LRG) BK Y-GREEN -			
Q1	0TR387500AA	CHIP 2SC3875S(ALY) KEC	ZD1101	0DZRM00178A	UDZS TE-17 5.1B ROHM			
Q100	0TR387500AA	CHIP 2SC3875S(ALY) KEC	ZD1102	0DZRM00178A	UDZS TE-17 5.1B ROHM			
Q1101	0TR387500AA	CHIP 2SC3875S(ALY) KEC	ZD202	0DZRM00178A	UDZS TE-17 5.1B ROHM			
Q1101	0TR387500AA	CHIP 2SC3875S(ALY) KEC	ZD203	0DZRM00178A	UDZS TE-17 5.1B ROHM			
Q1102	0TR387500AA	CHIP 2SC3875S(ALY) KEC	ZD400	0DZ330009BA	ZENER HZT33 TAPING			
Q1103	0TR387500AA	CHIP 2SC3875S(ALY) KEC	ZD701	0DZ910009AJ	MTZJ9.1B TP ROHM-K DO34 0.5W 9.1V 5UA			
Q1200	0TR150400BA	CHIP 2SA1504S(ASY) KEC	ZD704	0DZ110009AD	MTZJ11B TP ROHM-K DO34 - 11V 5UA			
Q200	0TR387500AA	CHIP 2SC3875S(ALY) KEC	CAPACITOR					
Q202	0TR387500AA	CHIP 2SC3875S(ALY) KEC	C10	0CE227DF618	220UF STD 16V M FL TP5			
Q353	0TR150400BA	CHIP 2SA1504S(ASY) KEC	C101	0CE107BF618	100UF KME 16V M FL TP5			
Q402	0TR150400BA	CHIP 2SA1504S(ASY) KEC	C1101	0CC15003G06	15PF D 3KV 10%, -10% SL FMTW			
Q403	0TR150400BA	CHIP 2SA1504S(ASY) KEC	C1102	0CC15003G06	15PF D 3KV 10%, -10% SL FMTW			
			C1105	0CC15003G06	15PF D 3KV 10%, -10% SL FMTW			
			C1106	0CC15003G06	15PF D 3KV 10%, -10% SL FMTW			

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	CQ : Polyester	RS : Metal Oxide Film
	CE : Electrolytic	RN : Metal Film
		RF : Fusible

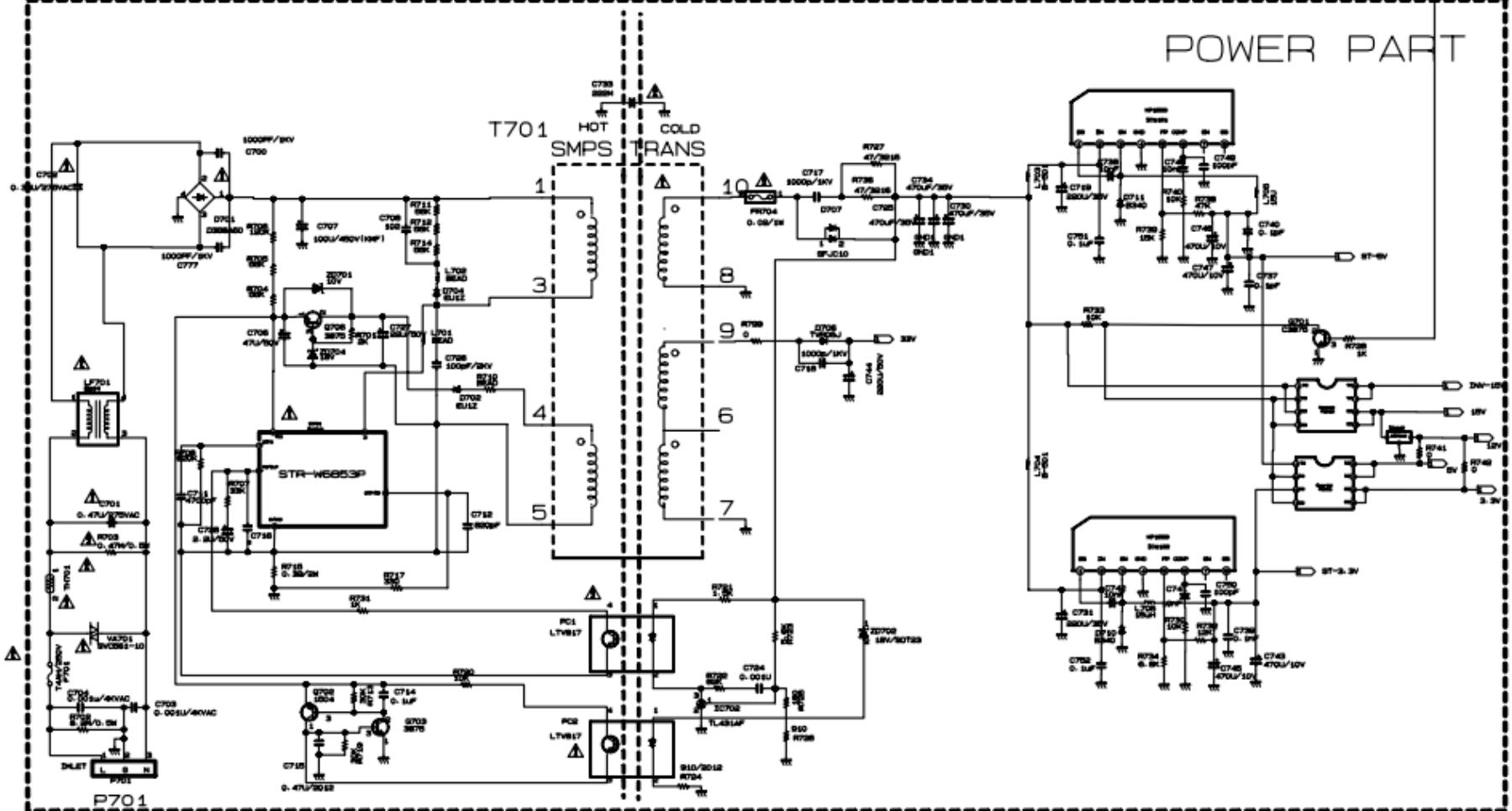
LOCA. NO	PART NO	DESCRIPTION	LOCA. NO	PART NO	DESCRIPTION
C1107	0CE4772J618	470UF KMF 35V 20% TP 5 FL	C364	0CE336DF618	33UF STD 16V M FL TP5
C1127	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C380	0CE105DK618	1UF STD 50V M FL TP5
C1128	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C381	0CE106DF618	10UF STD 16V M FL TP5
C113	0CE107BF618	100UF KME 16V M FL TP5	C383	0CE106DF618	10UF STD 16V M FL TP5
C1140	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C403	0CE476DH618	47UF STD 25V 20% FL TP 5
C1141	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C404	0CE108DD618	1000UF STD 10V M FL TP5
C1142	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C408	0CE106DK618	10UF STD 50V M FL TP5
C1143	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C410	0CE227DF618	220UF STD 16V M FL TP5
C1144	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C412	0CE105DK618	1UF STD 50V M FL TP5
C1145	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C413	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C1146	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C499	0CE476DK618	47UF STD 50V M FL TP5
C1147	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C501	0CE107DF618	100UF STD 16V M FL TP5
C1150	0CE4772J618	470UF KMF 35V 20% TP 5 FL	C523	0CE104DK618	0.1000UF STD 50V M FL TP5
C1151	0CE4772J618	470UF KMF 35V 20% TP 5 FL	C526	0CE107DF618	100UF STD 16V M FL TP5
C1200	0CE227DH618	220UF STD 25V M FL TP5	C541	0CE107DF618	100UF STD 16V M FL TP5
C1201	0CN475FH67A	4.7UF 3225 25V 20% R/TP X5R	C581	0CE107DF618	100UF STD 16V M FL TP5
C1202	0CN475FH67A	4.7UF 3225 25V 20% R/TP X5R	C613	0CE106DF618	10UF STD 16V M FL TP5
C1207	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C614	0CE106DF618	10UF STD 16V M FL TP5
C1208	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C616	0CE107DF618	100UF STD 16V M FL TP5
C1209	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C617	0CE107BF618	100UF KME 16V M FL TP5
C1210	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C617	0CE107BH618	100UF KME 25V M FL TP5
C1211	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C620	0CE335DK618	3.3UF STD 50V 20% FL TP 5
C1222	0CN475FH67A	4.7UF 3225 25V 20% R/TP X5R	C621	0CE107BF618	100UF KME 16V M FL TP5
C1223	0CN475FH67A	4.7UF 3225 25V 20% R/TP X5R	C624	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C1226	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C625	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C1227	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C629	0CE107DF618	100UF STD 16V M FL TP5
C1228	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C633	0CE107DF618	100UF STD 16V M FL TP5
C1229	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C643	0CE476BF618	47UF KME TYPE 16V 20% FL TP 5
C1230	0CN475FH67A	4.7UF 3225 25V 20% R/TP X5R	C700	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%
C1231	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C701	0CF474285B0	0.47UF S 275V 10% PCX2 337 BULK
C1234	0CK105DF64A	1UF 2012 16V 20% R/TP F(Y5V)	C703	181-120P	470 PF 4KV K JE R FL 10
C1235	0CE107DD618	100UF STD 10V M FL TP5	C704	181-120P	470 PF 4KV K JE R FL 10
C13	0CE227DF618	220UF STD 16V M FL TP5	C706	0CE226BK618	22UF KME 50V M FL TP5
C200	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C707	0CE107V610	100UF KMF 450V 20% FL BULK
C201	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C708	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%
C209	0CE476DF618	47UF STD 16V M FL TP5	C709	181-120K	2200PF 4KV M E FMTW LEAD 4.5
C211	0CE106DF618	10UF STD 16V M FL TP5	C710	181-120K	2200PF 4KV M E FMTW LEAD 4.5
C212	0CE227DD618	220UF STD 10V M FL TP5	C717	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%
C215	0CE106DF618	10UF STD 16V M FL TP5	C718	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%
C216	0CE106DF618	10UF STD 16V M FL TP5	C719	0CE227DJ618	220UF STD 35V M FL TP5
C219	0CE226DF618	22UF STD 16V M FL TP5	C725	0CE4772J618	470UF KMF 35V 20% TP 5 FL
C220	0CE226DF618	22UF STD 16V M FL TP5	C726	0CK10101515	100PF D 1KV 10% B(Y5P) TR
C225	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C727	0CE226BK618	22UF KME 50V M FL TP5
C226	0CK225DFK4A	2.2UF 2012 16V 20%,-20% F(Y5V) R/TP	C728	0CE476BK618	47UF KME 50V M FL TP5
C289	0CE104DK618	0.1000UF STD 50V M FL TP5	C730	0CE4772J618	470UF KMF 35V 20% TP 5 FL
C331	0CE107DF618	100UF STD 16V M FL TP5	C731	0CE227DJ618	220UF STD 35V M FL TP5
C351	0CE227DF618	220UF STD 16V M FL TP5	C733	181-120K	2200PF 4KV M E FMTW LEAD 4.5
C353	0CE475DK618	4.7UF STD 50V 20% FL TP 5	C733	181-120N	1000PF 4KV M E FMTW LEAD4.5
C354	0CE476DF618	47UF STD 16V M FL TP5	C734	0CE4772J618	470UF KMF 35V 20% TP 5 FL
C356	0CE106DF618	10UF STD 16V M FL TP5	C743	0CE477BD618	470UF KME TYPE 10V 20% FL TP 5
C357	0CE106DF618	10UF STD 16V M FL TP5	C744	0CE227DK618	220UF STD 50V M FL TP5
C362	0CE107DF618	100UF STD 16V M FL TP5	C745	0CE477BD618	470UF KME TYPE 10V 20% FL TP 5

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LOCA. NO	PART NO	DESCRIPTION	LOCA. NO	PART NO	DESCRIPTION			
C746	0CE477BD618	470UF KME TYPE 10V 20% FL TP 5	L518	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5% CHIP 100 OHM*4			
C747	0CE477BD618	470UF KME TYPE 10V 20% FL TP 5	R702	0RKZVTA001C	8.2M OHM 1/2 W 5% TA52 UL PILKOR			
C777	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%	R703	0RKZVTA001K	0.47M OHM 1/2 W 5% TA52 PILKOR			
C810	0CK823DK56A	82000PF 2012 50V 10% R/TP X7R	R704	0RS5602K619	56K OHM 2 W 5.00% TR			
C832	0CE107DF618	100UF STD 16V M FL TP5	R705	0RS5602K619	56K OHM 2 W 5.00% TR			
COIL & TRANSFORMER								
L1201	6140VR0005B	SLF7045T-330MR82 TDK 33UF SMD	R706	0RS1203K607	120K OHM 2 W 5.00% TA62			
L1202	6140VR0005B	SLF7045T-330MR82 TDK 33UF SMD	R711	0RS5602K619	56K OHM 2 W 5.00% TR			
L1203	6140VR0005B	SLF7045T-330MR82 TDK 33UF SMD	R712	0RS5602K619	56K OHM 2 W 5.00% TR			
L1204	6140VR0005B	SLF7045T-330MR82 TDK 33UF SMD	R714	0RS5602K619	56K OHM 2 W 5.00% TR			
L174	0LC0233002A	INDUCTOR,3.3UH CERATECH R/TP	R715	180-A01E	2 W RW ROUND G 2W 0.33J TA31(63)			
L175	0LC0233002A	INDUCTOR,3.3UH CERATECH R/TP	R727	0RD0472H609	47 OHM 1/2 W 5.00% TA52			
L176	0LC0233002A	INDUCTOR,3.3UH CERATECH R/TP	R736	0RD0472H609	47 OHM 1/2 W 5.00% TA52			
SWITCH								
SW1101	140-313A	TACT 2LEAD 100G(TA) NON 5V 0.001A HORIZONTAL	SW1102	140-313A	TACT 2LEAD 100G(TA) NON 5V 0.001A HORIZONTAL			
SW1103	140-313A	TACT 2LEAD 100G(TA) NON 5V 0.001A HORIZONTAL	SW1104	140-313A	TACT 2LEAD 100G(TA) NON 5V 0.001A HORIZONTAL			
SW1105	140-313A	TACT 2LEAD 100G(TA) NON 5V 0.001A HORIZONTAL	SW1106	140-313A	TACT 2LEAD 100G(TA) NON 5V 0.001A HORIZONTAL			
SW1107	140-313A	TACT 2LEAD 100G(TA) NON 5V 0.001A HORIZONTAL	SW1108	140-313A	TACT 2LEAD 100G(TA) NON 5V 0.001A HORIZONTAL			
JACK								
JA201	6612VCH003B	PEJ012C H=6.5 STEREO 1P W/O S/W WHITE	RJ201	6613V00008F	PMJ014F PARK ELEC E/P(ST)+S-VHS+3P H6.5			
SC204	381-091B	S-091B UGCOM SCART 21 PIN W/O BOSS	CRYSTAL & FILTER					
P1	6602V12005A	1.25MM 20P 12507WR-20 YEONHO LN-20A2	L1	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
P100	366-932E	2.5MM 6P GIL-G LG CABLE S (STICK)	L101	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
P101	6602V20005L	2.0MM 12P GIL-S LG CABLE STRAIGHT	L1101	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
P1101	6630VV00102	35001WR YEONHO 2P 3.5MM SMD	L1101	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
P1101	6631V20014E	12P 2.0MM 300MM H-B UL1061 AWG26	L119	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
P1101A	366-922F	2.5MM 7P GIL-G LG CABLE R/A (B TO C)	L1200	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
P1102	387-A07B	7P 2.5MM 150MM H-B UL1007AWG26	L1205	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
P1102	6630VV00102	35001WR YEONHO 2P 3.5MM SMD	L1206	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
P1103	6630VV00102	35001WR YEONHO 2P 3.5MM SMD	L200	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
P1104	6630VV00102	35001WR YEONHO 2P 3.5MM SMD	L200	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
P1105	6630VV00102	35001WR YEONHO 2P 3.5MM SMD	L201	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
P1106	6630VV00102	35001WR YEONHO 2P 3.5MM SMD	L201	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
P601	366-932B	2.5MM 3P GIL-G LG CABLE S (STICK)	L202	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
P602	366-932C	2.5MM 4P GIL-G LG CABLE S (STICK)	L202	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
P900	6630G15E215	KSD 15P 2.29MM KCN-DS-3-0054 (DIP TYPE)	L204	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
RESISTOR								
FR704	0RP0020J809	0.02 OHM 1 W 20% TA52	L205	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
L502	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5% CHIP 100 OHM*4	L206	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
L503	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5% CHIP 100 OHM*4	L207	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
L504	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5% CHIP 100 OHM*4	L208	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
L505	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5% CHIP 100 OHM*4	L209	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
L506	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5% CHIP 100 OHM*4	L298	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
L507	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5% CHIP 100 OHM*4	L299	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
			L351	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			

LOCA. NO	PART NO	DESCRIPTION	LOCA. NO	PART NO	DESCRIPTION
L400	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP	F701	131-098B	FUSE,SLOW BLOW 4000MA 250 V 5.2X20
L402	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP	P701	6620VZ0002A	SOCKET (CIRC),DRAWING IS7007 I-SHENG AC SOCKET
L501	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP	PA1101	6726VV0006D	REMOTE CONTROLLER RECEIVER, TSOP48380N1
L515	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP	TH701	163-048D	THERMISTOR, KL15L2R5 SSANSHIN +/- 15% 125V
L516	6210VC0004A	BK3216 4S600 TAIYOYUDEN 3.2X1.6X0.8MM R/TP	TU401	6700PF0002A	TUNER, TAFH-S321D LG PAL FS 4SYS,LE/LL-15A15
L517	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP	VA701	164-003K	VARISTOR, SVC621D-14A ILJIN 620V 0%
L580	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD	MISCELLANEOUS		
L581	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
L601	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
L602	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
L603	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
L701	125-022K	FERRITE 1UH TAPING			
L702	125-022K	FERRITE 1UH TAPING			
L703	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
L704	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
L801	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
L802	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
L803	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
L99	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/TP			
LF701	6200JB8012Q	OR 14*7*7.5H SMC BK 6.0-11.0MH 0.55PHY			
R1108	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
R1109	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
R1110	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
R1111	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
R1112	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
R226	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
R228	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
R229	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
R230	6200JB8010L	MLB-201209-1000L-N2 MAG LAYERS			
R505	6210TCE001A	HB-1S2012-080JT CERATEC 2012MM CHIP-BEAD			
R710	125-022K	FERRITE 1UH TAPING			
Z100	156-A01L	RESONATOR,CRYSTAL HC49U 6.000MHZ 30PPM			
Z500	156-A02X	RESONATOR,CRYSTAL HC49U 27.000MHZ 25PPM			
Z600	156-A02M	RESONATOR,CRYSTAL HC49U 18.432MHZ 30PPM			
ACCESSORIES					
A1	3828VA0450B	MANUAL,OWNERS ML024E DG/BN LG GE/FR/NE/EN			
A1	3828VA0450C	MANUAL,OWNERS ML024E HS LG GR/EN 126F TX			
A1	3828VA0450D	MANUAL,OWNERS ML024E UK/WTY LG EN 126F TX			
A1	3828VA0450F	MANUAL,OWNERS ML024E IS/REG LG IT 126F TX			
A1	3828VA0450G	MANUAL,OWNERS ML024E ES/PB			
A1	3828VA0450H	MANUAL,OWNERS ML024E LG GE/EN FR/IT			
A1	3828VA0450J	MANUAL,OWNERS ML024E FS LG FR 126F TX 335A			
A1	3828VA0450K	MANUAL,OWNERS ML024E SW LG DA/SW NO/FI			
A2	6710V00126F	REMOTE CONTROLLER, ML024E W/O PIP			
A3	6410VBH005A	POWER CORD, SP60+IS034			
A3	6410VEH008A	POWER CORD, SP022+IS034			
A3	6410VEH008C	POWER CORD, SP027+IS034 1800MM 3P			
A3	6410VEH008D	POWER CORD, SP28+IS-034 1800MM 3P			
A4	6851V00004D	CABLE ASSEMBLY, AUDIO TO AUDIO 2000MM			
A5	6866VA9001A	CONNECTOR (CIRC),D-SUB 2990-9C,AT,L1830			

POWER PART



SVC. SHEET : 3854VA0136A-S